



SEQUENCE LISTING

<110> Takatsuji, Hiroshi

<120> Promoter Having Specific Activity to
Pistil Tissue and Use of the Same

<130> 59150-8012

<140> US 09/979,433

<141> 1999-05-21

<150> PCT/JP99/02692

<151> 1999-05-21

<160> 9

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 3723

<212> DNA

<213> Petunia hybrida

<400> 1

gatatcgctt	cactaccgtc	tgttggtggc	ccaatgacat	ttaggggggc	ggcgaaatta	60
actatttcac	caccaatgat	cacggtggtg	gtggtggtgg	cggcagcagg	aatttcacgc	120
ccagaatggc	tgctagagtt	ctgagcagaa	ttggtggcag	acttcttctt	tttttacaaa	180
gaagcttggtg	attacgactt	taattataga	tttcaataag	cacaaatagg	aatttctctt	240
gcttcgaaat	tgctacagtt	ggaataagat	aaagtaaaaa	tgggtggtgtg	attaagtggg	300
catttatatg	tgagaagtca	tcattgtctt	gggaaggagg	acgaaatggc	gcaacctttc	360
caacggtcgc	cgcggtgtaac	ggatgggaag	gtgaagcgat	ggctaccttt	ttgaattact	420
tggcacacga	gcagccacac	cacttctccc	gcttggtttt	cattccactc	ctcgggcact	480
ctggcaattg	ctcgaggagt	agggggacta	tctgtactgg	gcaaaatatg	atttgcacac	540
gtagccgccc	aagcataaag	ttcgggatac	tttttgcaag	attcacaagt	tggatgaggt	600
agcgacatgg	cttcggaagc	gaagcctcag	gatcgagatc	atttghtaagc	gtcgtaatat	660
gatcgcttca	gagaacaggc	agttcatcgc	cctaagggtga	aatgatctta	acctcaggag	720
gatagttcgg	ctacagcgta	agaggcgccc	catgatctcc	gcccagtatc	tcagcattta	780
acgggtaaga	tttggggcag	accacaattt	agatagagtg	ggctaattaa	tgcccttaat	840
tgtcactaac	atatggtcta	taagtaaaat	tcatttttatc	ttgtaaagat	attcacaaat	900
ttataggcaa	tactctgccc	aattgtaatc	tcaaggcatt	catattgaaa	tcgttacttt	960
gtgctcttat	tgtccattca	tttccattaa	tttcttgtcc	tttaccact	ttgatacatc	1020
aaattatttg	taaaatataa	attcaattat	ttccctactc	cgatttagag	aaatataatt	1080
actactatag	attaaaatac	aaattttacat	tatcaaaata	aatctaacaa	agtacacata	1140
aacaagcttg	taaaagtaag	cgtgtggaaa	tggggatcta	acaaaaagca	tgatgcacga	1200
ctaggtcctt	tcttttttcc	cccaacaaga	cgcgatgcat	ttacttccct	agaaaactcc	1260
ttttttcaaac	gaataggatg	agaacgttag	taatttcctc	cctagcaacc	cccacccatg	1320
acccatcatc	tttcattccc	aatcagagaa	aaaattttagc	tcaagatcct	taattaaagg	1380
acattataat	ttccaaatta	tttattattc	cttcgctggt	ataaagatat	aataaaaaacg	1440
tatgaaagtt	cagccaacgt	attaaataag	atgccacaat	tttgtggtcg	gcccagccag	1500
caccatgcca	aaattttcac	ctcctagcct	tgtagtggaa	aatttttatcc	atccaccaca	1560
tcctcgactg	agaatcgaca	tcacaagcac	aagcaaagat	tcactagtgg	agcttcctcc	1620
aggtaaagag	ggggttactt	tgggtggttg	tcatacccaa	tttaaacaca	tgacatacat	1680
acatacatat	agtggcttgg	tgtaaaaaaa	ttttgtgggt	aagtttttag	tacaatttat	1740
ttgtctccgt	ccttaattca	ataccagcag	ttttgttgac	tgtttacgaa	attaagttaa	1800
actaaattta	atatcctaac	ctcttttctt	ttttttcttt	ttttttataat	ggtttaatta	1860
caaattcttg	gcaaagagtg	atgtaatctt	tagcaaagca	tagagtattt	tatgtgatcc	1920
tttttcatat	aataagaggg	aaacgtattt	aaaggcccaa	gttaacagag	gatagaaagg	1980

attatatcaa	gtttgatccg	atatacaatc	cagtatttta	tttatataat	ccagtataat	2040
acgtcaaatt	ataccgtcat	tgtaaaatta	ttgtcaaata	cattaactta	aaccctttat	2100
taaattaccc	cgcataacat	gtgtaggggt	athtaggaat	agtagagatg	ggattgaact	2160
aaatgcaaag	ctcgcatggt	acatgttggt	cccttctact	ctcttttcta	tctttgcctt	2220
tatgcatacg	ttttaattga	gttttcttta	ttaattgcat	atttccggtt	taaagaaaaa	2280
tacttccaat	taattcagaa	tctaactttc	tcttaaatgt	tttttttttc	tgttgtaaaa	2340
atgtcatccc	ttaaatattc	ttgctcttta	tattcttggt	gcaggaagag	tgctcgtcac	2400
atactttaaa	acaattcaga	gtatttgcaa	gaacaaaaca	cggacaacac	acagcaaatt	2460
agtgaagaaa	cagactcaat	tccctcaatt	tcatcatccc	cagaagatga	agagaatgcg	2520
aagaaaaaga	tattgaatta	taggatcaga	gtgaatccaa	agaagagcct	tagaattatg	2580
gatcttctac	aagatagaga	gagtgaacc	gagtcattac	catatccaac	acaatgtaaa	2640
cgataacaag	ggatcataaa	ctcaagaatc	tcagatacac	attacaatca	gtttttatca	2700
ttagaacgac	gacgacaaca	acaacaacaa	cagtatggaa	agattacaga	gtttccattt	2760
gttgagtctg	agccagtgag	ttcaatttca	gacacttcac	cagatgaaga	cgttgcgaac	2820
tgcttgatga	tgttatctag	agataagtgg	atgacacaag	aaaatgaagt	tatcgacaat	2880
agtgctagct	atgatgaaga	tgtaaaaaa	gaggactctg	tagttgttaa	agtgacaacg	2940
actaggaggg	gtagaggtaa	gtacatatgt	gaaacatgta	acaaagtttt	tagatcttat	3000
caagcacttg	gtggctcatag	agcaagtcac	aagaagatta	aagtctcaat	taatgaaaca	3060
aaaaacaatg	gaaatgtaga	aagtgagggt	caaaaggata	aaatacatga	atgtcctggt	3120
tgttacagag	tattttcatc	aggacaagct	cttgggtggac	acaagagggt	acatgggtatt	3180
ggtgtagcag	ccacaaatgt	gagtctttca	acaaaaattg	tatcatcaag	aattagtggg	3240
actatgatag	atctcaatat	tccgtctaca	ttggaggatg	atgagattag	tcaaattgag	3300
gtttctgcag	tttctgatga	tgaatttgtc	aacccttgag	tcgaagggtc	atcagaaaag	3360
acccctgtag	gagtaagatc	tgcgtaacat	tcaccctcct	cagaattcat	ctgtaggatt	3420
atatcaggta	cattgttatt	gctgttgaa	ttgtcatccc	catcaagcac	tgaaatgatg	3480
ttattcttag	agttaatgaa	actcaagaat	tataggtaaa	gttttggtct	tattttgacc	3540
tttttaagtt	cttaggtatg	gaactaagga	aattgatcag	tactttttct	tggaatacat	3600
tagcactttc	caagctatac	tcattgaata	tctgaatagt	tttgactgta	attaaatttt	3660
ccaactctgc	tttggtttatg	ttacagctta	ttaatatcat	ctattaattt	aactctgttc	3720
tgt						3723

<210> 2

<211> 2651

<212> DNA

<213> Petunia hybrida

<400> 2

cgaattgggt	acgtcgacgt	acatgccatt	atctttccct	tctcttagtc	cttgatttgg	60
aataacttct	tccatttttt	aattccaata	aacttgtccc	ttcaaattat	atgttttact	120
tttttaaaat	ttagatagtt	agtaggaaat	gaagactgca	actatcaa	aatggagtat	180
gatggatgag	acccctccac	tatttatgta	gcgcaactcg	aaattaatct	gttcagtaaa	240
tatcgaatac	aatatgggta	tagaaaaaca	aaatacataa	agtaagaaaa	taaagggaca	300
gacaagaact	tttccctttg	catcgaatag	aaaaaggaag	ataaaaaatg	actaacaat	360
taattacagt	tgaaactata	agtacgagta	aatttcattg	acggtcaccc	aactttcatg	420
tttgttatcc	aaaagttact	attatttcat	atgttatcca	aaaatcattt	aactttattt	480
taagttacat	aaaaataatt	ttgccatgaa	atagcttaat	acatgcttga	aaatgacttc	540
actagagtac	ataattttga	ttaaatataa	ttaatgtatt	aaactcctta	cttgacctat	600
attaaaaaat	tgactcagtt	gtctaaagct	catacaaatc	ttacacactc	aaattattgg	660
gttttagcttt	ctatttttgg	ctttttattg	ttaagtttta	ctgttttaagt	tattgggtata	720
gttattttgt	atttcttttt	tgtgctatcc	ggcgagtaaa	caataaatta	tcaaatagaa	780
ggttgcaacc	aaaacaactt	ctaattttta	cttttcataa	tagtggattc	gagagggaatc	840
catgattttc	ttggaaaata	attttttagc	acataatagc	cctagcagag	agaaccaaga	900
gagaaatttg	gaaataagca	aatactgata	tatgaattag	tgatttaatc	ttaatttaat	960
taagcaatct	tttattttta	cttccacgtc	acttttcagg	cgtgtattaa	taagtttagtt	1020
ccggacaaaa	ttattttttg	gcaacttagg	taaaaattga	atgatttttg	ggttacaaaa	1080
aaaaaaaaaa	aaaaaagaat	agtgatcttt	agttaacaaa	tatgaaaatt	gaatgaccat	1140
ccatgaaatt	tactcttacc	catgaaattt	actcctataa	gtactaacia	gaacttttct	1200
tatttgtctg	ttgttagatt	aatcggtaga	gcttcctata	caatagtcca	aacaaaaata	1260
tctgatccgt	cgttacaacc	accaagcagt	ttccttgact	caaattaagt	aaaggttaaa	1320
cctaattatt	tctaggaaac	tcttttcttg	tctccatttg	cccgtcttgg	ccattaataa	1380

gaaaaacaaa	tgaattttaag	ttttatccac	taatagtaaa	aagaaaattc	tacattacca	1440
atgttatatt	ttggacaaat	tctactaata	ggttactgat	cctcttatta	ggattatcaa	1500
cttatagtca	cctaaatgca	gctagtttta	aacgatttgg	ttgtgtaaat	aattttttaa	1560
atacctcaaa	attaaatcta	tttttcttga	aatcaaataa	tttaaagagg	aaatctcaat	1620
tggtaatgct	ttcttttagta	agttaattgt	tgtaaattatt	catgtgggat	atatgaagtc	1680
aactctactt	atatttttagg	taacgtaata	atttaaaaaa	tttaattaaa	tagtaagtcc	1740
ctcgtctcac	tttattttatc	atacattttt	tagtccatcc	aaaaaagaat	atcattttac	1800
cattaatgaa	atgattttata	ttcacacaga	tacctattgt	ttgtttttaga	tcataaattt	1860
taaaacactt	ttttttattta	ttaaattttg	tgtcaagtca	aaacatgaac	gaatacagta	1920
tttaaaagtt	aaactcaagc	aaaaagaaaa	agagatttgt	aaagggctgt	ttagagaata	1980
tacagaagag	atggaaataa	atgcaaaggt	cgcatgttac	atgtccttcc	cattcactca	2040
ctctgccttc	atgcatacgc	tttaattgag	ctttttcttt	tccctattaa	ttaccttttg	2100
cogtttttaag	taaaattact	cctactgaat	ccaaagtaca	tctgatttaa	caaataactaa	2160
taaatcagat	ttgtcttaaa	tatatctcta	tttgtatata	tctgttggtg	gtggaatgct	2220
tgttacctac	tccttttattc	cactctctac	ataacataag	aactcccaag	aaaacaaaaa	2280
cacacatact	gagtgtgaaa	aatggagaaa	cacaagtcac	gtaagctatg	tttttaggaag	2340
tttgctaattg	gtagagcttt	agggtggcat	atgagatctc	acatgatgaa	tctttatgta	2400
caaaaacaac	aaatgactga	tgaaatggag	tattcaattc	cttcatcttc	atggctctct	2460
gggtgaagtag	ctgtgggtga	tgccgatgat	tcgggtattg	ttcttccaga	taaggaaaagt	2520
gaaactgagt	catcaagaaa	ccaagctcct	tttagaaaagt	ccaaaagggtc	aagaaaatca	2580
agaattgtca	aagttaaaga	gtactcatca	ttggttgata	cagagccagt	aagttcaata	2640
tcagagaatt	c					2651

<210> 3

<211> 2991

<212> DNA

<213> Petunia hybrida

<400> 3

gatatcgagc	tagcccggcc	cgattgacag	gtataaccta	gagtgtttca	aatatgactc	60
gggattggag	aaagtagtca	gttatctggt	aatctttttt	taagagttga	agggtgggatg	120
tcaattttct	taaactaaat	gtagtgaaaa	catattagtt	acttcatttt	acttactaat	180
gtaaatgatta	ctcccttcgg	tccactttat	ttgatttttt	aatctttttt	ttttgtccaa	240
aataattgat	ttgttcaaaa	ttcaaaaagt	tattaaaggg	ttcttcccaa	atatactctt	300
attaataaat	aatctaacac	aatattttaa	agacctcaca	gatttctaca	aataaatttg	360
ataggaacaa	aagttaatat	cgtaataaat	ctccttaatt	aatgttaaaa	ggtgaatttg	420
taaatatgtg	tgaaaacaac	aaaaaaaaat	caagagtaac	tatttgatcc	caagaatatc	480
agtactttatt	aggataaaga	aagtaaaata	atgtggaaat	gaaatgaacg	ctacgtataa	540
cacgttgtaa	agggaacatg	tcattattcc	atactttttac	caaacctaat	gattggatga	600
aacataagat	tgtaatggca	gaaatataaa	ttaggagaat	tttcagaaaag	ccggcgtgat	660
ttttgggtcg	taatcaatta	actaagtaaa	gtgatgaacc	ttggtttttag	tagtagcaca	720
aaagtgggta	gtgggtcaac	tgcacatgga	atttgcttca	ttcattaaca	tcactaactc	780
caatccaacc	aagtccactc	ccactagtta	tgctcaacaa	atatattttcc	acactccatt	840
atcactccaa	ctaatttttt	gtttctccaa	aaataacaaa	cgatttctct	tctaattgcat	900
agctagcatc	attgtaatta	gatataatcta	aagaaaattt	acatgacaaa	cttgtgatct	960
tatcagcaat	taagatttaa	gtctcatcaa	gctctttcat	tttctttttt	actacttcta	1020
ccgctgctac	tccaaatgaa	aaaaacttgc	ataaacactt	ttgataggta	agcaaatcgc	1080
acctatgaac	tttttttaaaa	taattttaatg	gtgttggtcg	agctactatt	ttgtacacat	1140
ctaaattatt	ttatatgtac	tatctcacag	gtattgaata	attttggtcca	ccaaaattta	1200
tcggtatatt	gaaagaaatc	atctaattgaa	ttttacctta	atttgttttg	atcatttcac	1260
ttcattcagt	gttaggcgac	gtcctttttag	gctatagaat	tatacttatg	gacttggcaa	1320
ttaaatttag	tcattcttaa	tgacaactga	agctaaggta	gttaattagt	atttgatgat	1380
atatttaaaa	aatgcttcaa	actgtgaagt	aacttaaagg	gtgtgaaatt	aaagagagat	1440
ttattttttct	tctgtatttt	ttaattgaag	gcgcaaattg	tgtgggtgcca	ggcttgcaact	1500
ccaatcctcc	acaagggtatc	gttggcataa	agtaatgggg	tttgcttcaa	agccaaccga	1560
atcttactcc	tttctctacc	tcctcatact	tctcattact	cattacattg	catcttcccc	1620
ccccccccc	cccccccacg	tccccaacc	ataacctcta	tatacatata	catataatca	1680
ccttatatat	ataactatat	atatcattgc	ctatatatat	aacttgcaaa	gtttgtaagt	1740
gcaagaaaa	agtgaacatt	ttcaagatca	ctattcacgg	gggcggcttc	tttttcaactt	1800
tacctaaaa	ctccctttca	ttcactacca	ctcttccaaa	acacatatat	acactcactg	1860

tgttacatcg	ttttctccat	tccctttgtg	aaataaaaaca	tacctttgcc	tcttcttttt	1920
gtttcttttt	ccccacctct	tgaaaaaggt	cagtgacctt	tgaattataa	aaaaagacaa	1980
aggcactaca	atggaagttc	aatgcaaga	agatcatgat	catcacatga	atatggtgat	2040
caaaagaagg	agaactaaaa	gaccaagacc	atcttctcct	ctagctttta	caattgctac	2100
tagctcatgt	agcaccgtgg	aagggaactca	tgctggtgaa	ttggacggac	atgtggcgaa	2160
ttcgtcgtct	tcgccttcaa	attctgggat	tgatatactt	atcagaaata	gagaagaaga	2220
agatatggct	aattgtttga	ttcttttagc	acaaggtcat	aataaccaaa	agccgtctcc	2280
ttctcattct	ccattggatg	tctaccaatg	caaaacatgc	aaccgttggt	tcccttcggt	2340
tcaagcactt	ggtggacata	gagcaagtca	taaaaaacca	aaactaccaa	ccaacttaga	2400
agagaaaaat	tcaaagccaa	ttgaacatgt	tgagaattgt	tccaagtcga	acgaggatca	2460
tgtcacaact	ttgtcacttc	aaatttcgaa	caataatatt	aacaacaaca	acagcaacaa	2520
caacaacaac	aataacatca	tcaagaataa	gaatagggtt	catgaatggt	cgatttggtg	2580
agcgggaattt	acttcagggc	aagcattagg	aggacacatg	agacgacata	gaccattacc	2640
aaatagtatt	gcaattgcaa	gtactagcca	tgaattagag	tcttctcatg	aaataaagaa	2700
cacaaggaat	ttcttgtcac	tggaccttaa	tctaccggcg	cctgaagacg	atcatcggcc	2760
agaaacgaaa	ttctcatttg	catcaaaaga	acaagtcatc	gtcttctcag	cttctccttt	2820
ggttgattgc	cattactaaa	tcaacacact	ggccctttat	ttatttttcg	ctattttttt	2880
tttttttgta	tttcttgatt	tattttaatc	atgacacaat	tgtgaattat	tggttaacacc	2940
ttatttttat	tattgtacat	tcaacaattt	attaatagac	ataattcctt	g	2991

<210> 4
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 4
 ccggggatcc atcatcttgt agaagatcca t 31

<210> 5
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 5
 ccggggatcc acatgacttg tgtttctcca t 31

<210> 6
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 6
 ccggggatcc ttcttgcat tgaacttcca t 31

<210> 7
 <211> 253
 <212> PRT
 <213> Petunia hybrida

<400> 7
 Met Asp Leu Leu Gln Asp Arg Glu Ser Glu Thr Glu Ser Leu Pro Tyr

1	5	10	15
Pro Thr Gln Cys Lys Arg Tyr Lys Arg Ile Ile Asn Ser Arg Ile Ser			
20	25	30	
Asp Thr His Tyr Asn Gln Phe Leu Ser Leu Glu Arg Arg Arg Gln Gln			
35	40	45	
Gln Gln Gln Gln Tyr Gly Lys Ile Thr Glu Phe Pro Phe Val Glu Ser			
50	55	60	
Glu Pro Val Ser Ser Ile Ser Asp Thr Ser Pro Asp Glu Asp Val Ala			
65	70	75	80
Asn Cys Leu Met Met Leu Ser Arg Asp Lys Trp Met Thr Gln Glu Asn			
85	90	95	
Glu Val Ile Asp Asn Ser Ala Ser Tyr Asp Glu Asp Val Lys Thr Glu			
100	105	110	
Asp Ser Val Val Val Lys Val Thr Thr Thr Arg Arg Gly Arg Gly Lys			
115	120	125	
Tyr Ile Cys Glu Thr Cys Asn Lys Val Phe Arg Ser Tyr Gln Ala Leu			
130	135	140	
Gly Gly His Arg Ala Ser His Lys Lys Ile Lys Val Ser Ile Asn Glu			
145	150	155	160
Thr Lys Asn Asn Gly Asn Val Glu Ser Glu Val Gln Lys Asp Lys Ile			
165	170	175	
His Glu Cys Pro Val Cys Tyr Arg Val Phe Ser Ser Gly Gln Ala Leu			
180	185	190	
Gly Gly His Lys Arg Ser His Gly Ile Gly Val Ala Ala Thr Asn Val			
195	200	205	
Ser Leu Ser Thr Lys Ile Val Ser Ser Arg Ile Ser Gly Thr Met Ile			
210	215	220	
Asp Leu Asn Ile Pro Ala Thr Leu Glu Asp Asp Glu Ile Ser Gln Ile			
225	230	235	240
Glu Val Ser Ala Val Ser Asp Asp Glu Phe Val Asn Pro			
245	250		

<210> 8
 <211> 116
 <212> PRT
 <213> Petunia hybrida

<400> 8
Met Glu Lys His Lys Ser Cys Lys Leu Cys Phe Arg Lys Phe Ala Asn
1 5 10 15
Gly Arg Ala Leu Gly Gly His Met Arg Ser His Met Met Asn Leu Tyr
20 25 30
Val Gln Lys Gln Gln Met Thr Asp Glu Met Glu Tyr Ser Ile Pro Ser
35 40 45
Ser Ser Trp Ser Ser Gly Glu Val Ala Ala Gly Asp Ala Asp Asp Ser
50 55 60
Gly Ile Val Leu Pro Asp Lys Glu Ser Glu Thr Glu Ser Ser Arg Asn
65 70 75 80
Gln Ala Pro Phe Arg Lys Ser Lys Arg Ser Arg Lys Ser Arg Ile Val
85 90 95
Lys Val Lys Glu Tyr Ser Ser Leu Val Asp Thr Glu Pro Val Ser Ser
100 105 110
Ile Ser Glu Asn
115

<210> 9
 <211> 282
 <212> PRT
 <213> Petunia hybrida

Met	Glu	Val	Gln	Met	Gln	Glu	Asp	His	Asp	His	His	Met	Asn	Met	Val
1				5					10					15	
Ile	Lys	Arg	Arg	Arg	Thr	Lys	Arg	Pro	Arg	Pro	Ser	Ser	Pro	Leu	Ala
			20					25					30		
Leu	Thr	Ile	Ala	Thr	Ser	Ser	Cys	Ser	Thr	Val	Glu	Gly	Thr	His	Ala
		35					40					45			
Gly	Glu	Leu	Asp	Gly	His	Val	Ala	Asn	Ser	Ser	Ser	Ser	Pro	Ser	Asn
	50				55						60				
Ser	Gly	Ile	Asp	Ile	Leu	Ile	Arg	Asn	Arg	Glu	Glu	Glu	Asp	Met	Ala
65					70				75					80	
Asn	Cys	Leu	Ile	Leu	Leu	Ala	Gln	Gly	His	Asn	Asn	Gln	Lys	Pro	Ser
			85					90					95		
Pro	Ser	His	Ser	Pro	Leu	Asp	Val	Tyr	Gln	Cys	Lys	Thr	Cys	Asn	Arg
			100					105					110		
Cys	Phe	Pro	Ser	Phe	Gln	Ala	Leu	Gly	Gly	His	Arg	Ala	Ser	His	Lys
		115					120					125			
Lys	Pro	Lys	Leu	Pro	Thr	Asn	Leu	Glu	Glu	Lys	Asn	Ser	Lys	Pro	Ile
	130					135					140				
Glu	His	Val	Glu	Asn	Cys	Ser	Lys	Ser	Asn	Glu	Asp	His	Val	Thr	Thr
145					150					155					160
Leu	Ser	Leu	Gln	Ile	Ser	Asn	Asn	Asn	Ile	Asn	Asn	Asn	Asn	Ser	Asn
			165						170					175	
Asn	Asn	Asn	Asn	Asn	Asn	Ile	Ile	Lys	Asn	Lys	Asn	Arg	Val	His	Glu
			180					185					190		
Cys	Ser	Ile	Cys	Gly	Ala	Glu	Phe	Thr	Ser	Gly	Gln	Ala	Leu	Gly	Gly
		195					200					205			
His	Met	Arg	Arg	His	Arg	Pro	Leu	Pro	Asn	Ser	Ile	Ala	Ile	Ala	Ser
	210					215					220				
Thr	Ser	His	Glu	Leu	Glu	Ser	Ser	His	Glu	Ile	Lys	Asn	Thr	Arg	Asn
225					230						235				240
Phe	Leu	Ser	Leu	Asp	Leu	Asn	Leu	Pro	Ala	Pro	Glu	Asp	Asp	His	Arg
			245						250					255	
Pro	Glu	Thr	Lys	Phe	Ser	Phe	Ala	Ser	Lys	Glu	Gln	Val	Ile	Val	Phe
			260					265					270		
Ser	Ala	Ser	Pro	Leu	Val	Asp	Cys	His	Tyr						
		275					280								